

# Giant Intracanalicular Fibroadenoma

## With Report of Five Cases

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### SUMMARY

*Five cases of giant intracanalicular fibroadenoma ("cystosarcoma phylloides") were observed at one hospital in a period of three years. In a search of the literature, additional reports of breast tumors of this kind, not included in previous reviews, were noted. As there is record of 229 cases, it would appear that this rapidly growing benign tumor should be kept in mind in the diagnosis of masses in the breast.*

*If removal is incomplete, there may be recurrence. Simple mastectomy is the treatment of choice. Radical mastectomy should be avoided.*

JOHANNES MULLER is credited with classifying and assigning the name *cystosarcoma phylloides* to a non-malignant tumor of the breast which frequently grows rapidly to large size. Although the term assigned by Muller has been used for over a century, the description "giant intracanalicular fibroadenoma" is also used and would seem to be more accurate. The tumor has been reported by various other names, an excellent list of which was compiled by Owens and Adams. Recently the authors have observed five cases, which are reported in this presentation.

Giant intracanalicular fibroadenoma usually is observed as a freely movable mass replacing most of the normal breast tissue, with no retraction of the nipple and no axillary lymph node enlargement. Changes in the skin over the mass are rare. They occur only when local necrosis and ulceration are caused by the large size of the growth. The tumor is characterized by rapid and bulky enlargement, sometimes after a long period of little or no growth. Histologically it has many of the features of sarcoma, but it does not metastasize. Although infrequent cases have apparently been of a malignant variant,<sup>6, 34</sup> the neoplasm is considered to be benign. It is generally accepted that simple mastectomy is the treatment of choice.

### LITERATURE

Lee and Pack,<sup>20, 21</sup> reviewing the literature in 1931, collected reports of 105 cases and reported six

cases they had observed. Owens and Adams<sup>29</sup> collected reports of 12 cases published between 1931 and 1941 and themselves reported a case. A number of cases have been reported since 1941. In addition, in a search of the literature, reports of a number of cases not included in previous reviews were noted: Six cases reported by Greenough and Simon<sup>15</sup> in 1911, four by Geist and Wilensky<sup>13</sup> in 1915, one by Martin<sup>26</sup> in 1933, two by Smith in 1935, one by Crile<sup>8</sup> in 1938, and one by Hopkins<sup>18</sup> in 1940.

White<sup>34</sup> reported a case in which a 34-year-old woman died with metastases from a sarcomatous breast tumor which he concluded was a malignant variant of giant intracanalicular fibroadenoma. Hill and Stout<sup>16</sup> reviewed in detail ten cases observed at Columbia University School of Medicine between 1911 and 1940. They used the term "adenofibrosarcoma, intracanalicular type." Althabe and Beruti<sup>3</sup> reported a case in which a 45-year-old woman had a 1,800-gm. tumor of the left breast. Hinterberger<sup>17</sup> reported a case of giant intracanalicular fibroadenoma in a 39-year-old woman. In 1943 Cooper and Ackerman<sup>6</sup> reviewed the history of three patients with the disease. One of these had several recurrences and axillary metastases. In that case the growth was considered malignant.

Fox and co-workers<sup>11</sup> treated a 15-year-old unmarried girl with a breast tumor "the size of a baby's head." They also reported the case of a married woman, 50 years of age, with giant intracanalicular fibroadenoma "the size of a large orange." Marano<sup>25</sup> reported upon a 28-year-old woman with "myxoma of the breast." (It is assumed the lesion was giant intracanalicular fibroadenoma.)

Adair and Herrmann,<sup>1</sup> in a discussion of sarcoma of the breast, mentioned 45 cases of giant intracanalicular tumor observed between 1926 and 1944 at Memorial Hospital, New York. Assuming that this included the six cases originally reported by Lee and Pack,<sup>21</sup> then this represents 39 additional cases to be added to the total.

Aiken<sup>2</sup> reported a case of a 68-year-old woman with a tumor weighing 2,370 gm. He used the term "Brodie's disease of the breast." (Giant intracanalicular fibroadenoma was described in the English literature by Sir Benjamin Brodie<sup>4</sup> in 1840, and his name is occasionally still used in connection with it.)

Montenegro and Marcondes<sup>27</sup> reported a case of giant intracanalicular fibroadenoma in the South American literature. Jones<sup>19</sup> mentioned seven cases observed by him. Llewellyn<sup>22</sup> reviewed the case of a

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78-year-old woman with a "giant adenosarcoma" weighing 4,650 gm. — undoubtedly a giant intracanalicular fibroadenoma. Clarke<sup>5</sup> treated a 52-year-old woman with a 10-pound tumor of the breast. The patient also had a toxic adenoma of the thyroid gland. Walsh and Warren<sup>33</sup> reported a case in which a 47-year-old woman had a giant intracanalicular fibroadenoma 14 cm. in diameter. Gerwig<sup>12</sup> reported removal of a 7,830-gm. tumor from the breast of a Negro woman. Mannix and Wildnauer<sup>24</sup> presented a case in which a 29-year-old woman had a tumor of the left breast that weighed 4,785 gm. Ulceration through the skin occurred. In the right breast were three nodules which also proved to be giant intracanalicular fibroadenoma. McDonald and Harrington<sup>23</sup> summarized 13 cases observed at the Mayo Clinic between 1904 and 1943.

In all, 224 cases of breast neoplasm of this type have been reported to date. The authors have observed five additional cases.

#### CASE REPORTS

**CASE 1:** A 33-year-old Negro woman was admitted to hospital March 2, 1949, with productive cough and enlargement of the left breast. The patient said that fever and productive cough had been present for four months and that in that time body weight had decreased 20 pounds. A small lump in the left breast had been noted about one year previously. It remained unchanged for about six months, then began to grow rapidly. The patient had had seven pregnancies, four terminated by abortion and two by stillbirth; there was one living child, 17 months of age, which the patient had nursed.

The left breast was firm and enlarged to 12x15x15 cm. In an x-ray film of the chest a pulmonary cavity involving almost all the left upper hemithorax was observed, and there was also some infiltration of the right central lung field. The sputum contained many acid-fast bacilli. A diagnosis of pulmonary tuberculosis was made. Pneumoperitoneum was carried out and streptomycin was administered. The question of tuberculous involvement of the left breast was considered in the differential diagnosis of the tumor.

On March 15, 1949, simple mastectomy was done with local anesthesia. A part of the pathological report follows:

The specimen consisted of an ovoid mass of firm, rubbery, nodular tissue, measuring 14x11x6 cm. (Figure 2). On the cut surface numerous translucent nodules of pale yellowish tissue, measuring from 2 to 5 cm. in diameter, separated by very thin fibrous septa, were observed. There was an occasional small cystic cleft containing clear, pale green, gelatinous material. In histological sections the basic pattern of intracanalicular adenofibroma was observed (Figure 3). There had been no recurrence of the growth at the time of this report.

**CASE 2:** A 32-year-old unmarried nulliparous Negro woman was admitted to hospital because of an irregular, enlarged uterus and a mass in the left breast. A small lump had been present in the left breast for three years, but more rapid enlargement of the mass had been noted during the preceding six months.

Two of the patient's sisters had had uterine "fibroids" removed, each at the patient's present age. The patient had had rheumatic fever at the age of 10 and had had occasional exacerbations since.

Upon physical examination a systolic mitral murmur was noted. There was a firm, movable 8x6x5 cm. mass occupying

the upper inner quadrant of the left breast. In the lower abdomen was an irregular movable mass the size of a fetus at six months. The following diagnoses were made: (1) rheumatic heart disease, (2) probable fibroadenoma of the left breast, (3) leiomyomata of the uterus.

On April 8, 1949, the mass in the left breast was removed. In a frozen section it was observed to be giant intracanalicular fibroadenoma (Figures 4 and 5).

A large leiomyomatous uterus was removed in total hysterectomy a week later. Recovery from both operations was uneventful.

**CASE 3:** A 51-year-old married white woman was admitted to hospital August 11, 1949. She said she had had a "benign

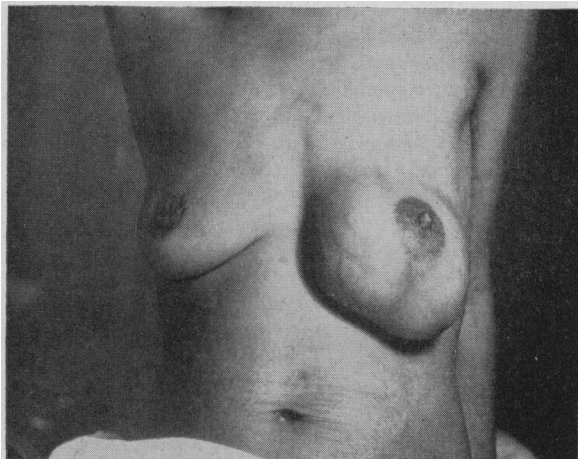


Figure 1 (Case 1).—Bulky tumor of the left breast with no evidence of nipple retraction or of "orange peel" skin.

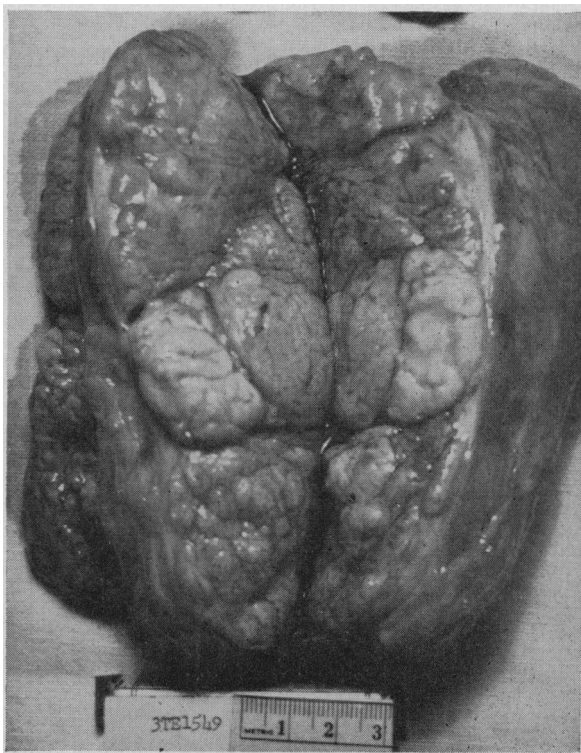


Figure 2.—Cut surface of tumor in Case 1. Note the lobular structure in which, grossly, there is no evidence of invasive growth.

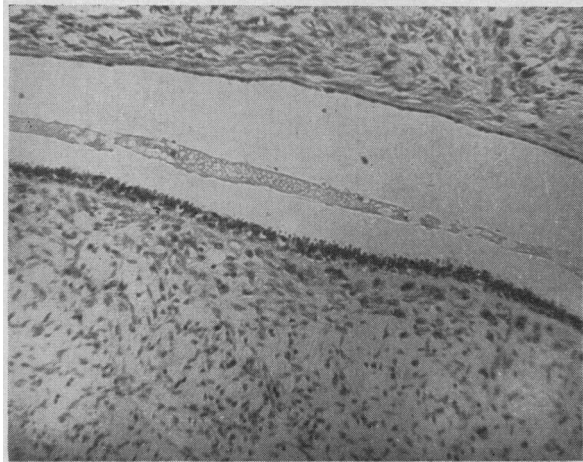


Figure 3 (Case 1).—At the lower portion of the picture is the edge of an intracanalicular mass. The myxomatous character is easily seen.

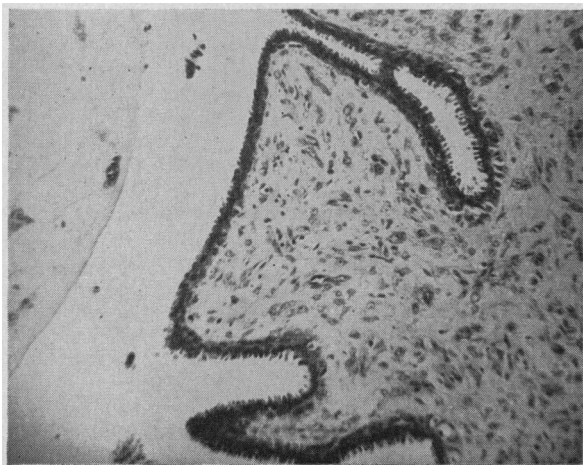


Figure 4 (Case 2).—The serrated margin of the papillomatous growth in a large cystic duct. The resemblance to the edge of a leaf has given the tumor one of its names—phyllodes, meaning "leaf-like."

lump removed from the left breast" in 1945. About a year later the patient noted recurrence of a small mass which continued to enlarge during the ensuing three years. She had been married for 32 years and had two daughters, ages 31 and 15, living and in good health.

There was a 10x7 cm. mass in the left breast. Axillary lymph nodes were not palpable.

A preoperative impression of giant intracanalicular fibroadenoma was recorded by a member of the staff, and simple mastectomy was carried out when a biopsy specimen examined in frozen section confirmed the diagnosis. The gross specimen and paraffin sections were typical of giant intracanalicular fibroadenoma.

CASE 4: A 56-year-old Portuguese widow was admitted on March 31, 1946, with history of progressive enlargement of a mass in the left breast over a period of two years.

The mass, the size of a small orange, was firm and freely movable. No axillary lymph nodes were palpable.

On April 4 a biopsy specimen was removed. Examination of a frozen section strongly indicated the tumor was malignant, and left radical mastectomy was done. In later examination of a paraffin section, the structure was observed to be typical of giant intracanalicular fibroadenoma, for which simple mastectomy would have sufficed. There has been no

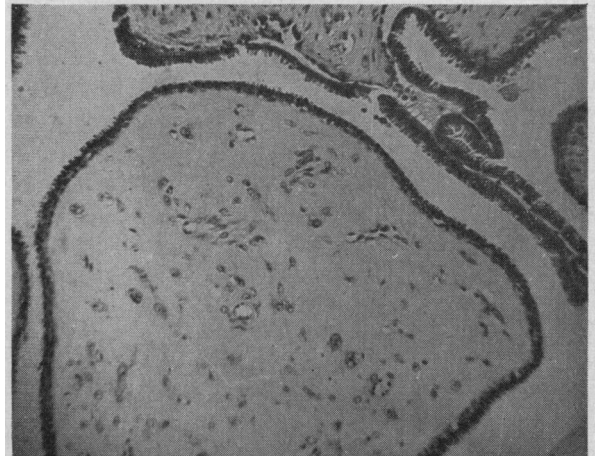


Figure 5 (Case 2).—Papillomatous growths into a cystic duct. Large bizarre nuclei are visible in the fibrous stroma.

evidence of recurrence, but the patient has had some swelling of the left arm since the operation.

CASE 5: A 47-year-old single white woman was admitted to the hospital December 10, 1949. A benign tumor diagnosed as adenofibroma had been removed from the left breast at another hospital in 1940.

Five weeks before the present entry the patient had noted in the left breast a small mass which rapidly increased in size during the two weeks immediately prior to entry.

Upon physical examination the left breast was observed to be replaced by a firm, rounded mass, approximately 10 cm. in diameter, which was not fixed either to the skin or to the wall of the chest. Axillary lymph nodes were not palpable.

A preoperative diagnosis of giant intracanalicular fibroadenoma was made. After the diagnosis was confirmed in examination of a frozen section, simple mastectomy was done. The wound healed rapidly and there has been no evidence of recurrence.

#### CONCLUSION

As 229 cases of giant intracanalicular fibroadenoma, including five cases in this presentation, have been reported in the literature, it would appear that breast tumors of this type are more common than was previously assumed. In diagnosis of masses in the breast this rapidly growing benign tumor should be kept in mind. Since incomplete removal may result in a recurrence, simple mastectomy would appear to be the treatment of choice. Radical mastectomy should not be done.

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